domains of human IGF-1R are shown based on a sequence alignment for the two proteins and a structural alignment for the L1 and L2 domains. Positions showing conservation physico-chemical properties of amino acids are boxed, residues used in the structural alignment are shown in Times Italic and residues which form the Trp 176 pocket are in Times Bold. Secondary structure elements for L1 (above the sequences) and L2 (below) are indicated as cylinders for helices and arrows for *B*-strands. Strands are shaded (pale, medium and dark grey) according to the *B*-sheet to which they belong. Disulfide bonds are also indicated. b, Cys-rich domains of human IGF-1R, IR and EGFR (domains 2 and 4) are aligned based on sequence and structural considerations. Secondary structural elements and disulfide bonds are indicated above the sequences. The dashed bond is only present in IR. Different types of disulfide bonded modules are labeled below the sequences as open, filled or broken lines. Boxed residues show conservation of physico-chemical properties and structurally conserved residues for modules 4-7 are shown in Times Italic. Residues from EGFR which do not conform to the pattern are in lowercase with probable disulfide bonding indicated below and the conserved Trp 176 and the semi-conserved Gln 182 are in Times Bold.--

B1

Please substitute the second full paragraph on page 11 of the specification with the following rewritten paragraph.

B2

-- **Figure 9**. Sequence alignment of hIGF-1R (SEQ ID NO.11), Hir (SEQ ID NO. 12), and hIRR (SEQ ID NO. 13) ectodomains, derived by use of the PileUp program in the software

package of Genetics Computer Group, 575 Science Drive, Madison, Wisconsin, USA. for assignment of homologous 3D structrues see Figure 6.--

Please substitute the third paragraph on page 20 and continuing on to page 21 of the specification with the following rewritten paragraph.

-- The expression plasmid pEE14/IGF-1R/462 was constructed by inserting the olignucleotide cassette (SEQ ID NO. 14 and SEQ ID NO. 15):

AatII

5' GACGTC GACGAT GACGATAAG GAACAAAAACTCATC

D V D D D D K E Q K L I

(EK cleavage) (c-myc tail)

S E E D L N (Stop)

TCAGAAGAGGATCTGAAT TAGAATTC GACGTC 3'

EcoRI *AatII*

encoding an enterokinase cleavage site, c-myc epitope tag (Hoogenboom, H.R., et a., 1991, Nucleic acids Res. 19:4133-4137) and stop codon into the AatII site (within codon 462) of Igf-1r cDNA in the mammalian expression vector pECE (Ebina, Y., et al., 1985, Cell, 40:747-758; kindly supplied by W.J. Rutter, UCSF, USA), and introducing the DNA comprising the 5' 1521 bp of the cDNA (Ulrich, A., et al., 1986, EMBO J. 5:2503-2512) ligated to the oligonucleotide cassette into the EcoRI site of the mammalian plasmid expression vector pEE14 (Bebbington, C. R. & Hentschel, C. C. G., 1987, In: Glover, D. M., ed. DNA Cloning. Academic Press, San Diego. Vol 3, p163; Celltech Ltd., UK). Plasmid pEE14/IGF-1R/462 was transfected into Lec8

mutant CHO cells (Stanley, P. 1989, Molec. Cellul. Biol. 9:377-383) obtained from the American Tissue Culture Collection (CRL:1737), using Lipofectin (Gibco-BRL). Cell lines were maintained after transfection in glutamine-free medium (Glascow modification of Eagle's medium (GMEM; ICN Biomedicals, Australia) and 10% dialysed FCS (Sigma, Australia) containing 25 μm methionine sulphoximine (MSX; Sigma, Australia) as described (Bebbington, C.R. & Hentschel, C. C. G., 1987, In: Glover, D. M., ed. DNA Cloning. Academic Press, San Diego. Vol3, p163). Transfectants were screened for protein expression by Western blotting and sandwich enzyme-linked immunosorbent assay (ELISA) (Cosgrove, L., et a., 1995[,]) using monoclonal antibody (Mab) 9E10 (Evan et al., 1985) as the capture antibody, and either biotinylated anti-IGF-1R Mab 24-60 or 24-31 for detection (Soos et al., 1992; gifts from Ken Siddle, University of Cambridge, UK). Large-scale cultivation of selected clones expressing IGF-1R/462 was carried out in a Celligen Plus bioreactor (New Brunswick Scientific, USA) containing 70 g Fibra-Cel Disks (Sterilin, UK) as carriers in a 1.25 L working volume. Continuous perfusion culture using GMEM medium supplemented with non-essential amino acids, nucleosides, 25μM MSX and 10% FCS was maintained for 1 to 2 weeks followed by the more enriched DMEM/F12 without glutamine, with the same supplementation for the next 4-5 weeks. The fermentation production run was carried out three times under similar conditions, and resulted in an estimated overall yield of 50 mg of receptor protein from 430 L of harvested medium. Cell growth was poor during the initial stages of the fermentation when GMEM medium was employed, but improved dramatically following the switch to the more enriched